

No.

200200245

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

University of Idaho and Idaho Agricultural
Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Brundage 96'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this first day of July, in the year two thousand three.

Attest:

W. M. Johnston
Commissioner

Plant Variety Protection Office
Agricultural Marketing Service

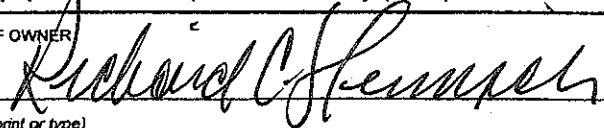
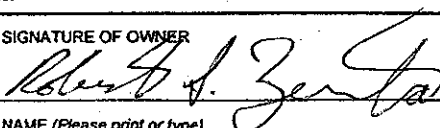
W. L. G. Freeman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER 6/21/03 University of Idaho and Idaho Agricultural Experiment Station		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME ID-B-96	3. VARIETY NAME Brundage 96
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2331		5. TELEPHONE (include area code) 208-885-7173	FOR OFFICIAL USE ONLY PVPO NUMBER 200200245
6. FAX (include area code) 208-885-6654		FILING DATE Sept. 5, 2002	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Land grant college	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <div style="display: flex; justify-content: space-between;"> <div> Richard Heimsch Idaho Agricultural Experiment Station University of Idaho Moscow, ID 83844-2331 </div> <div> Robert S. Zemetra PSES University of Idaho Moscow, Idaho 83844-2339 </div> </div>			FILING AND EXAMINATION FEES: \$ 2705.00 DATE 9/5/02 CERTIFICATION FEE: \$ 320.00 DATE 1/28/2003
11. TELEPHONE (include area code) 208-885-7173	12. FAX (include area code) 208-885-6654	13. E-MAIL rzemetra@uidaho.edu	14. CROP KIND (Common Name) soft white winter wheat
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		16. FAMILY NAME (Botanical) Gramineae	
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)	
19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED * NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.	
SIGNATURE OF OWNER  NAME (Please print or type) Richard C. Heimsch		SIGNATURE OF OWNER  NAME (Please print or type) Robert S. Zemetra	
CAPACITY OR TITLE Director, Assoc. Dean	DATE 9/4/02	CAPACITY OR TITLE Professor	DATE 8/22/02

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

~~22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)~~

U.S., October 3, 2001, sale of foundation seed

23. CONTINUED FROM FRONT Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent.)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

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EXHIBIT A. ORIGIN AND BREEDING HISTORY OF BRUNDAGE 96

Brundage 96 (PI 631486) was a head row reselection from a pre-breeder seed field of Brundage (4) in 1996 making its pedigree the same as Brundage, 'Stephens'/'Geneva' (2,3). Selection was based on a slight visual difference in leaf color at heading and a difference in response to stripe rust (*Puccinia striiformis* Westend.). Heads were harvested and planted out in head rows in the fall of 1996 and the fall of 1997. Each head row was evaluated for response to stripe rust and chaff color at harvest. Head rows selected in 1998 were bulked and entered into the Western Regional Soft Winter Wheat Nursery in 1998 for three years of testing (1998, 1999, 2000) as ID-B-96. The line was also evaluated over four years in the Advanced Breeding Line Nursery (1998, 1999, 2000, and 2001) and extension trials in Idaho, Washington and Oregon in 1999 and 2000. ID-B-96 was evaluated by the Pacific Northwest Quality Council in 2001. In 1998, approximately 1000 head rows of ID-B-96 were grown at Moscow, Idaho and selected for uniform plant type. Seed from selected head rows were harvested and planted in 1999 at Moscow to produce Breeder seed. Brundage 96 has been examined for uniformity and absence of segregation since it was placed in advanced line testing in 1998. It was observed to be uniform and stable over three generations of seed increase (pre-breeder, breeder and foundation) from 1999 to 2001. Taller (3 to 4 inches), awnletted variants with head morphology similar to Brundage 96 have been observed in foundation seed fields of Brundage 96 at a frequency of .0006% variants per acre (approximately 5 variant plants per acre).

EXHIBIT B. NOVELTY STATEMENT

Brundage 96 is a soft white winter wheat that is most similar to Brundage and is intended for use in areas of the Pacific Northwest where Brundage's susceptibility to stripe rust has limited the use of Brundage. Both cultivars have similar heights, are both awnleted, and have similar seed characteristics. Brundage 96 can be differentiated from Brundage based on date of head emergence and level of resistance to stripe rust. Brundage 96 is later than Brundage in date of head emergence under dryland and irrigated conditions in the Moscow and Aberdeen, Idaho Advanced Breeding Line trial over four years (Exhibit D, Table 1). Date of head emergence or anthesis was taken for each plot by visually estimating when 50% of the heads had emerged on the plant tillers in the plot. Head emergence was considered to have occurred when the base of the head was visible above the collar of the flag leaf. Data for each location is based on the mean date of three replications. Date of head emergence was calculated using the Julian calendar. Based on the eight site-years, Brundage 96 had a significantly later date than Brundage based on a paired t-test ($P=0.05$). The heading date of Brundage 96 is more like that of Stephens' wheat and this was confirmed by a non-significant paired t-test ($P=0.05$) comparing these two cultivars.

Brundage 96 can also be differentiated from Brundage based on its level of adult plant resistance to stripe rust. In evaluation of Brundage and Brundage 96 in the Western Regional Soft Winter Wheat Nursery (1998-2002) disease trial in Mount Vernon, Washington, Brundage 96 consistently showed a greater level of adult resistance to stripe rust compared to Brundage (Exhibit D, Tables 18, 19, 20, 21). Based on the disease

ratings at Mount Vernon, WA from 1998-2002, Brundage 96 has a level of adult stripe rust resistance similar to that of the cultivar Stephens.

Both Brundage 96 and Brundage have large seed that would be classified as soft based on near-infrared analysis ('soft' classified as having an NIR score of less than 50) (Exhibit D, Table 13). Near-infrared analysis scores are based on single replicate 30 gram samples from the advanced breeding line trials. No difference was found for NIR hardness scores between Brundage 96 and Brundage based on paired t-tests ($P=0.05$).

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-005

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) University of Idaho	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2331	PVPO NUMBER 200200245
	VARIETY NAME Brundage 96
	TEMPORARY OR EXPERIMENTAL DESIGNATION ID-B-96

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common

2=Durum

3=Club

4=Other (SPECIFY): _____

2. VERNALIZATION:

1=Spring

2=Winter

3=Other (SPECIFY): _____

3. COLEOPTILE ANTHOCYANIN:

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect

2 = Recurved

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than Madsen

*

Number of Days Later Than Stephens

*

8. ANTHOR COLOR:

☐ 1

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☐ 1

cm Taller Than _____ *

☐ 0 ☐ 1cm Shorter Than Stephens _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

☐ 1

1 = Absent

2 = Present

B. WAXY BLOOM

☐ 2

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

☐ 2

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

☐ 1

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

☐ 1

1 = Absent

2 = Present

☐

cm Length

11. HEAD (at Maturity):

A. DENSITY

☐ 3

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

☐ 1

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (SPECIFY): _____

C. CURVATURE

☐ 1

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

☐ 2

1 = Awnless

2 = Apically Awnletted

3 = Awnletted

4 = Awned

12. GLUMES (at Maturity):

A. COLOR

☐ 1

1 = White

2 = Tan

3 = Other (SPECIFY): _____

C. BEAK

☐ 1

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

☐ 2

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

☐ 3

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

12. GLUMES (at Maturity) Continued:

200200245

E. WIDTH

☐ 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
☒ 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

☒ 1 = Ovate 2 = Oval 3 = Elliptical

C. BRUSH

☒ 2 = Short 2 = Medium 3 = Long

☒ 1 = Not Collared 2 = Collared

B. CHEEK

☒ 1 = Rounded 2 = Angular

D. CREASE

☒ 1 = Width 60% or less of Kernel
 2 = Width 80% or less of Kernel
 3 = Width Nearly as Wide as Kernel

☒ 2 = Depth 20% or less of Kernel
 2 = Depth 35% or less of Kernel
 3 = Depth 50% or less of Kernel

E. Color

☒ 1 = White 2 = Amber 3 = Red
 4 = OTHER (Specify)

G. PHENOL REACTION (see instructions):

☒ 4 = Ivory 2 = Fawn
 3 = Light Brown 4 = Dark Brown
 5 = Black

F. TEXTURE

☒ 2 = Hard 2 = Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

☒ 1 Stem Rust (*Puccinia graminis* f. sp. *tritici*)

☒ 1 Leaf Rust (*Puccinia recondita* f. sp. *tritici*)

☒ 2 Stripe Rust (*Puccinia striiformis*)
 adult resistance

☒ 0 Loose Smut (*Ustilago tritici*)

☒ 0 Tan Spot (*Pyrenophora tritici-repentis*)

☒ 0 Flag Smut (*Urocystis agropyri*)

☒ 0 Halo Spot (*Selenophoma donacis*)

☒ 1 Common Bunt (*Tilletia tritici* or *T. laevis*)

☒ 0 *Septoria nodorum* (Glume Blotch)

☒ 1 Dwarf Bunt (*Tilletia controversa*)

☒ 0 *Septoria avenae* (Speckled Leaf Disease)

☒ 0 Karnal Bunt (*Tilletia indica*)

☒ 0 *Septoria tritici* (Speckled Leaf Blotch)

☒ 0 Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)

☒ 0 Scab (*Fusarium* spp.)

☒ 0 "Snow Molds"

14. Disease (Continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input type="checkbox"/> 0	"Black Point" (Kernel Smudge)	<input type="checkbox"/> 0	Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 1	Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0	Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 0	Soilborne Mosaic Virus (SBMV)	<input type="checkbox"/> 0	Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input type="checkbox"/> 0	Wheat Yellow (Spindle Streak) Mosaic Virus	<input type="checkbox"/> 0	Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input type="checkbox"/> 1	Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 1	Other (SPECIFY) strawbreaker footrot <i>Pseudocercospora herpotrichoides</i>	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 1	Other (SPECIFY) Cephalosporium stripe <i>Hymenula cerealis</i>	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/>	Other (SPECIFY)	<input type="checkbox"/>	Other (SPECIFY)

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 0	Hessian Fly (<i>Mayetiola destructor</i>)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 0	Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 0	Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 1	Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 0	Greenbug (<i>Schizaphis graminum</i>)	<input type="checkbox"/>	Other (SPECIFY)
<input type="checkbox"/> 1	Aphids	<input type="checkbox"/>	Other (SPECIFY)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

EXHIBIT D. ADDITIONAL DESCRIPTION OF BRUNDAGE 96

Brundage 96 is an apically awnletted, semi-dwarf wheat with excellent straw strength. It is green in color and has erect flag leaves. It is similar in height to Brundage and is shorter than Stephens (Tables 2, 5). The days to anthesis of Brundage 96 (165 day of year DOY) is similar to Stephens (165 DOY) and later than Brundage (163 DOY) based on four years of data from Moscow and Aberdeen, Idaho (Table 1). Glumes are white, with an oblique shoulder and obtuse peak. The kernel characteristics are similar to those of Brundage being white, soft, and ovate with a mid-sized germ and a mid-deep crease. Brundage 96 was tested as ID-B-96 in the Western Regional White Winter Wheat Nursery for three years (1998 – 2000).

Brundage 96 is adapted to the intermediate to high rainfall areas of the Pacific Northwest. In rain-fed breeding trials in Idaho (24 site-years), Brundage 96 had a higher average yield (103 bu/acre) than either Stephens (94 bu/acre) or Brundage (97 bu/acre). In four years of irrigated trials, Brundage 96 was similar to Brundage for yield (138 bu/acre to 139 bu/acre) over 11 site-years (Table 3). In the Western Regional Soft Winter Wheat Nursery, Brundage 96 equaled or exceeded the yield of 'Madsen' (1) and Stephens over 3 years of testing averaging 113 bu/acre compared to 111 bu/acre for Madsen and 111 bu/acre for Stephens (Table 6). Brundage 96 has a test weight (58.5 lbs/bu) similar to Stephens (58.1 lbs/bu) and Brundage (58.7 lbs/bu) under rain-fed conditions (24 site years)(Table 4). In irrigated trials (11 site years), Brundage 96 (59.2 lbs/bu) was similar to Stephens (59.4 lbs/bu) but less than Brundage (60.3 lbs/bu) for test weight (Table 4). In extension trials in Idaho (22 site years), Oregon (15 site years) and Washington (34 site years), Brundage 96 had a similar yield compared to Stephens and Madsen. In Idaho

extension trials under rain-fed conditions, Brundage 96 had an average yield of 99 bu/acre while Stephens and Madsen had 94 bu/acre and 95 bu/acre respectively (Table 7). Under irrigated conditions in southern Idaho, Brundage 96 averaged 125 bu/acre, which was slightly less than Stephens at 128 bu/acre (Tables 8, 9). In Oregon, the yields were 103 bu/acre for Brundage 96, 104 bu/acre for Stephens, and 101 bu/acre for Madsen (Table 10). Yield for Brundage 96 in Washington extension trials (102 bu/acre) was equal or slightly greater than Stephens (100 bu/acre) and Madsen (98 bu/acre) (Table 11).

Brundage 96 has excellent end-use quality characteristics that are similar to Brundage. In four years of evaluation under rain-fed conditions in Idaho (19 site years), Brundage 96 averaged 8.1% flour protein, 14.8 NIR (near-infrared) hardness value, 44.8% break flour yield, and 8.8 cm sugar snap cookie diameter compared to 8.0% flour protein, 15.7 NIR hardness value, 43.4% break flour yield, and 8.9 cm cookie diameter for Brundage (Tables 12, 13, 14, 15). Results were similar under irrigated conditions (11 site years) with Brundage 96 averaging 9.2% flour protein, 14.5 NIR hardness value, 43.5% break flour yield, and 8.8 cm sugar snap cookie diameter in comparison to Brundage which averaged 9.1% flour protein, 17.1 NIR hardness value, 41.4% break flour yield, and 8.8 cm cookie diameter. In three years of testing in the Western Regional Soft Winter Wheat Nursery (1998-2000), composite samples of Brundage 96 were equal or superior to Stephens for percent flour protein (8.3 vs. 8.6), NIR hardness value (20 vs. 23), percent break flour yield (50.9 vs. 46.4), percent flour yield (68.8 vs. 68.1), percent flour ash (0.39 vs. 0.39), sugar snap cookie diameter (9.4 vs. 9.3 cm), and sponge cake volume (1247 vs. 1160 cm³) (Tables 16, 17). Brundage 96 was evaluated by the Pacific

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Northwest Quality Council and was found to have acceptable quality for a soft white winter wheat.

Brundage 96 has greater adult resistance to the prevalent northwestern biotypes of stripe rust (caused by *Puccinia striiformis* Westend.) than to Brundage. In four years of testing (1998-2001) in the Western Regional Soft Winter Wheat Nursery disease trial at Mt. Vernon, Washington at growth stages 4-7 (depending on the year), Brundage 96 percent stripe rust infection ranged from 10% to 20% with infection type either 2=8 or 5 while Brundage percent infection ranged from 80% to 99% with an infection type of 8. (Tables 18, 19, 20, 21). Brundage 96 is similar to Brundage in that it is susceptible to cephalosporium stripe (caused by *Hymenula cerealis* Ellis & Everh.), strawbreaker footrot (caused by *Pseudocercospora herpotrichoides* (Fron) Deighton), septoria tritici blotch (caused by *Septoria tritici* Roberge in Dsmaz.) common bunt (caused by *Tilletia tritici* (Bjerk.) G. Wint. In Rabenh.), and dwarf bunt (caused by *Tilletia controversa* Kühn in Rabenh.). Brundage 96 will show physiological leaf spot under cool, wet spring field conditions.

References

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2. Kronstad, W.E., C.R. Rhode, M.F. Kolding, and R.J. Metzger. 1978. Registration of 'Stephens' wheat. Crop Sci. 18: 1097.
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4. Zemetra, R.S., E.J. Souza, M. Lauver, J. Windes, S.O. Guy, B. Brown, L. Robertson, and M. Kruk. 1998. Registration of 'Brundage' wheat. Crop Sci. 38: 1404.

EXHIBIT D (continued) ADDITIONAL DESCRIPTION OF BRUNDAGE 96

- Table 1. Heading date for Brundage 96 compared to Stephens, Madsen, and Brundage in the Moscow and Aberdeen, Idaho Advanced Breeding Line Nurseries 1997-2000.
- Table 2. Height for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.
- Table 3. Yield (bu/acre) for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.
- Table 4. Test weight (lbs/bushel) for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.
- Table 5. Mean heading date and height data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.
- Table 6. Mean yield (bu/acre) and test weight (lbs/bushel) for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.
- Table 7. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 northern Idaho extension trials (5 rain-fed sites-1999 and 4 rain-fed sites-2000).
- Table 8. Agronomic data for Brundage 96, Brundage and Stephens from the 1999 and 2000 southwestern Idaho extension trials (4 irrigated sites-1999 and 4 irrigated sites-2000).
- Table 9. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 southeastern Idaho extension trials (3 irrigated sites-1999 and 3 irrigated sites-2000).
- Table 10. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 Oregon extension trials (8 sites-1999 and 7 sites-2000).
- Table 11. Agronomic data for Brundage 96, Madsen and Stephens from the 199 and 2000 Washington extension trials (17 sites-1999 and 17 sites-2000).
- Table 12. Percent flour protein for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.

Table 13. NIR (near-infrared) hardness for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.

Table 14. Percent break flour yield Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.

Table 15. Cookie diameter (cm) for Brundage 96 compared to Stephens, Madsen and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-2000.

Table 16. Protein and flour quality data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.

Table 17. Flour ash, starch viscosity and bake quality data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.

Table 18. Response of Brundage to stripe rust compared to Stephens, Madsen and Brundage from the 1998-1999 Western Regional Soft Winter Wheat Nursery.

Table 19. Response of Brundage to stripe rust compared to Stephens, Madsen and Brundage from the 1999-2000 Western Regional Soft Winter Wheat Nursery.

Table 20. Response of Brundage to stripe rust compared to Stephens, Madsen and Brundage from the 2000-2001 Western Regional Soft Winter Wheat Nursery.

Table 21. Response of Brundage to stripe rust compared to Stephens, Madsen and Brundage from the 2001-2002 Western Regional Soft Winter Wheat Nursery.

Table 1. Heading date for Brundage 96 compared to Stephens, Madsen, and Brundage in the Moscow and Aberdeen Idaho Advanced Breeding Line Nurseries 1997-2000.

cultivar	Moscow 97	Aberdeen 97	Moscow 98	Aberdeen 98	Moscow 99	Aberdeen 99	Moscow 00	Aberdeen 00	average
Stephens	161	168	166	166	163	163	170	163	165
Madsen	165	172	168	168	167	165	174	167	168
Brundage	155	165	163	165	160	164	169	163	163
Brundage 96	162	168	165	168	163	163	168	165	165

Table 2. Height for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Idaho Advanced Breeding Line Nurseries 1997-1999.

no. of sites	dryland-97	dryland-98	dryland-99	dryland-00	average	irrigated-97	irrigated-98	irrigated-99	irrigated-00	average
cultivar	6	6	6	6		2	3	2	3	
Stephens	37	28	33	32	32.5	40	31	36	32	34.8
Madsen	37	29	34	30	32.5	39	32	36	30	34.3
Brundage	33	27	32	29	30.3	40	29	34	29	33.0
Brundage 96	34	28	33	29	31.0	38	29	33	29	32.3

Table 3. Yield (bu/acre) for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-1999.

no. of sites	dryland-97	dryland-98	dryland-99	dryland-00	average	irrigated-97	irrigated-98	irrigated-99	irrigated-00	average
cultivar	6	6	6	6		2	3	3	3	
Stephens	101	78	112	85	94	140	154	172	128	149
Madsen	118	89	115	83	101	130	149	161	118	140
Brundage	95	91	113	88	97	133	147	149	125	139
Brundage 96	105	99	120	89	103	129	140	155	129	138

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Table 4. Test weight (lbs/bushel) for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-1999.

no. of sites cultivar	dryland-97 6	dryland-98 6	dryland-99 6	dryland-00 6	average	irrigated-97 2	irrigated-98 3	irrigated-99 3	irrigated-00 3	average
Stephens	55.6	57.2	59.8	59.7	58.1	59.2	59	60.2	59.1	59.4
Madsen	58.4	58.1	60.5	59.5	59.1	59.4	59.1	60.1	59.1	59.4
Brundage	57.2	58.6	59.6	59.5	58.7	59.9	61.9	59.9	59.3	60.3
Brundage 96	57.5	56.9	60.4	59.2	58.5	58.8	58.8	60.1	59.2	59.2

Table 5. Mean heading date and height data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.

cultivar	heading-98 (Julian)	heading-99 (Julian)	heading-00 (Julian)	height-98 (in.)	height-99 (in.)	height-00 (in.)
Stephens	163	153	156	34	31	31
Madsen	165	156	157	36	36	30
Brundage 96	162	153	155	34	33	29

Table 6. Mean yield (bu/acre) and test weight (lbs/bushel) Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nurseries 1998-2000.

cultivar	yield-98 (bu/acre)	yield-99 (bu/acre)	yield-00 (bu/acre)	test wt.-98 (lbs/bu)	test wt.-99 (lbs/bu)	test wt.-00 (lbs/bu)
Stephens	119	115	98	59.0	60.8	59.6
Madsen	121	118	95	59.1	60.9	60.0
Brundage 96	125	119	95	59.4	60.7	59.3

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Table 7. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 northern Idaho extension trials (5 dryland sites - 1999 and 4 sites - 2000).

cultivar	1999 height (in)	2000 height (in)	average height (in)	1999 yield (bu/acre)	2000 yield (bu/acre)	average yield (bu/acre)	1999 test wt. (lbs/bu)	2000 test wt. (lbs/bu)	average test wt. (lbs/bu)
Madsen	39	33	36.1	109	80	94.5	61.4	59.3	60.4
Stephens	39	33	35.9	109	82	95.5	61.4	59.8	60.6
Brundage-96	39	33	35.9	112	87	99.5	61.1	60.0	60.6

Table 8. Agronomic data for Brundage 96, Brundage and Stephens from the 1999 and 2000 southwestern Idaho extension trials (4 irrigated sites - 1999 and 3 sites - 2000).

cultivar	1999 height (in)	2000 height (in)	average height (in)	1999 yield (bu/acre)	2000 yield (bu/acre)	average yield (bu/acre)	1999 test wt. (lbs/bu)	2000 test wt. (lbs/bu)	average test wt. (lbs/bu)
Brundage	36.0	32.0	34.0	144	119	131.5	64.8	63.1	64.0
Stephens	38.0	34.7	36.4	156	122	139.0	63.6	61.3	62.5
Brundage-96	36.2	35.0	35.6	142	114	128.0	62.3	59.7	61.0

Table 9. Agronomic data for Brundage 96, Maden and Stephens from the 1999 and 2000 southeastern Idaho extension trials (3 irrigated sites - 1999 and 3 sites - 2000).

cultivar	1999 height (in)	2000 height (in)	average height (in)	1999 yield (bu/acre)	2000 yield (bu/acre)	average yield (bu/acre)	1999 test wt. (lbs/bu)	2000 test wt. (lbs/bu)	average test wt. (lbs/bu)
Madsen	37	31	34.0	139	111	125.0	61.6	58.7	60.2
Stephens	36	35	35.5	134	102	118.0	60.5	58.8	59.7
Brundage-96	34	32	33.0	134	111	122.5	61.4	58.2	59.8

Table 10. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 Oregon extension trials (8 sites - 1999 and 7 sites - 2000).

cultivar	1999 yield (bu/acre)	2000 yield (bu/acre)	average yield (bu/acre)	1999 test wt. (lbs/bu)	2000 test wt. (lbs/bu)	average test wt. (lbs/bu)
Madsen	104	99	101.5	59.5	61.3	60.4
Stephens	112	97	104.5	57.5	61.2	59.4
Brundage-96	106	100	103.0	58.5	61.7	60.1

Table 11. Agronomic data for Brundage 96, Madsen and Stephens from the 1999 and 2000 Washington extension trials (17 sites - 1999 and 17 sites - 2000).

cultivar	1999 height (in)	2000 height (in)	average height (in)	1999 yield (bu/acre)	2000 yield (bu/acre)	average yield (bu/acre)	1999 test wt. (lbs/bu)	2000 test wt. (lbs/bu)	average test wt. (lbs/bu)
Madsen	37	32	34.5	109	86.9	98.0	60.7	60.4	60.6
Stephens	36	32	34.0	112	88.0	100.0	60.5	59.9	60.2
Brundage-96	35	31	33.0	114	89.5	101.8	60.5	60.4	60.5

Brundage-96 quality

Table 12. Percent flour protein for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-2000.

no. of sites cultivar	dryland-97 4	dryland-98 4	dryland-99 5	dryland-00 6	average	irrigated-97 2	irrigated-98 3	irrigated-99 3	irrigated-00 3	average
Stephens	8.7	8.7	7.9	7.5	8.2	9.0	8.2	9.9	10.0	9.3
Madsen	9.5	9.2	8.2	7.6	8.6	9.4	8.3	10.6	10.6	9.7
Brundage	8.2	8.4	7.8	7.5	8.0	8.9	8.0	10.0	9.6	9.1
Brundage 96	8.4	8.3	8.0	7.6	8.1	8.8	8.3	9.8	9.8	9.2

Table 13. NIR (near-infrared) hardness for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-2000.

no. of sites cultivar	dryland-97 5	dryland-98 4	dryland-99 5	dryland-00 6	average	irrigated-97 1	irrigated-98 3	irrigated-99 3	irrigated-00 3	average
Stephens	21.8	22.5	26.5	9.1	20.0	26.1	22.5	22.2	12.8	20.9
Madsen	29.9	23.3	27.8	14.8	24.0	40.5	25.3	24.2	9.7	24.9
Brundage	18.3	18.1	17.2	9	15.7	19.9	20.7	17.9	9.9	17.1
Brundage 96	18.3	16.0	17.0	7.7	14.8	21.4	16.5	13.2	6.9	14.5

Table 14. Percent break flour yield for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-2000.

no. of sites cultivar	dryland-97 4	dryland-98 4	dryland-99 5	dryland-00 6	average	irrigated-97 2	irrigated-98 3	irrigated-99 3	irrigated-00 3	average
Stephens	34.9	40.4	40.2	34.6	37.5	34.7	38.9	38.4	33.8	36.5
Madsen	35.7	40.3	40.1	35.8	38.0	37.0	42.2	37.4	34.5	37.8
Brundage	41.7	45.2	46.4	40.3	43.4	39.6	44.5	42.2	38.7	41.3
Brundage 96	41.8	46.6	46.0	39.9	44.8	40.5	51.4	41.4	40.8	43.5

Table 15. Cookie diameter (cm) for Brundage 96 compared to Stephens, Madsen, and Brundage in the rain-fed and irrigated Advanced Breeding Line Nurseries 1997-2000.

no. of sites cultivar	dryland-97 4	dryland-98 4	dryland-99 5	dryland-00 average	irrigated-97 1	irrigated-98 3	irrigated-99 3	irrigated-00 3	average
Stephens	8.6	8.7	8.8	8.7	8.5	8.6	8.8	8.7	8.7
Madsen	8.5	8.4	8.6	8.4	8.6	8.5	8.6	8.4	8.5
Brundage	9.4	8.7	8.8	8.9	8.7	8.8	8.7	9	8.8
Brundage 96	8.9	8.7	9.1	8.8	8.8	8.7	8.9	8.9	8.8

Table 16. Protein and flour quality data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nursery 1998-2000.

cultivar	NIR hard.-98	NIR hard.-99	NIR hard.-00	flour pro.-98	flour pro.-99	flour pro.-00	flour yld.-98	flour yld.-99	flour yld.-00	bk fl.yld.-98	bk fl.yld.-99	bk fl.yld.-00
Stephens	18	26	26	(%) 7.5	(%) 8.7	(%) 9.7	(%) 69.2	(%) 68.1	(%) 67.1	(%) 47.2	(%) 45.5	(%) 46.6
Madsen	27	29	21	7.7	8.3	10.0	68.3	68.9	69.2	48.4	47.8	49.4
Brundage 96	17	22	20	7.4	8.2	9.3	69.0	69.1	68.3	50.8	50.7	51.3

Table 17. Flour ash, starch viscosity and bake quality data for Brundage 96 compared to Stephens and Madsen in the Western Regional Soft Winter Wheat Nursery 1998-2000.

cultivar	flour ash-98	flour ash-99	flour ash-00	RVA-98	RVA-99	RVA-00	cook.dia.-98	cook.dia.-99	cook.dia.-00	cake vol.-98	cake vol.-99	cake vol.-00
Stephens	(%) 0.35	(%) 0.40	(%) 0.41	116	110	112	(cm) 9.5	(cm) 9.2	(cm) 9.3	(cc) 1210	(cc) 1135	(cc) 1135
Madsen	0.37	0.38	0.43	104	119	115	9.4	9.2	9.2	1240	1195	1200
Brundage 96	0.35	0.39	0.42	106	55	123	9.5	9.2	9.4	1270	1230	1240

Table 18. Response of Brundage 96 to stripe rust compared to Stephens, Madsen and Brundage from the 1998-1999 Western Regional Soft Winter Wheat Nursery.

location stage cultivar	Pullman, Wa 7	Walla Walla, Wa 7	Mt. Vernon, Wa 7
Stephens	0%, 0	0%, 0	40%, 2=8
Madsen	0%, 0	0%, 0	5%, 2=5
Brundage	5%, 8	2%, 2=5	99%, 8
Brundage 96	0%, 0	0%, 0	20%, 2=8

Table 19. Response of Brundage 96 to stripe rust compared to Stephens, Madsen and Brundage from the 1999-2000 Western Soft Winter Wheat Nursery.

location stage cultivar	Pullman, Wa 6	Mt. Vernon, Wa 4
Stephens	0%, 0	20%, 2=8
Madsen	0%, 0	5%, 2=5
Brundage	10%, 8	80%, 8
Brundage 96	0%, 0	10%, 2=8

Table 20. Response of Brundage 96 to stripe rust compared to Stephens, Madsen and Brundage from the 1999-2000 Western Regional Soft Winter Wheat Nursery.

location stage cultivar	Pullman, Wa 7	Whitlow, Wa 6-7	Mt. Vernon, Wa 4-5
Stephens	0%, 0	0%, 0	15%, 2
Madsen	0%, 0	0%, 0	2%, 2
Brundage	0%, 0	5%, 8	90%, 8
Brundage 96	0%, 0	1%, 3	15%, 5

Table 21. Response of Brundage 96 to stripe rust compared to Stephens, Madsen and Brundage from the 2000-2001 Western Regional Soft Winter Wheat Nursery.

location stage cultivar	Pullman, Wa 7	Whitlow, Wa 7	Mt. Vernon, Wa 6
Stephens	0%, 0	0%, 0	5%, 2
Madsen	0%, 0	0%, 0	5%, 2
Brundage	10%, 8	5%, 5	90%, 8
Brundage 96	2%, 5	1%, 2	10%, 5

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) University of Idaho	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ID-B-96	3. VARIETY NAME Brundage 96
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Idaho Agricultural Experiment Station College of Agriculture University of Idaho Moscow, ID 83844-2339	5. TELEPHONE (include area code) 208-885-7173	6. FAX (include area code) 208-885-6654
7. PVPO NUMBER 200200245		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?
☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):

Brundage 96 is a reselection out of the cultivar Brundage. Brundage is a PVP protected cultivar (PVP no. 9800376) owned by the University of Idaho.

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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